



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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Commissioner

June 23, 2008

Attn: Jerry Leone  
Casella Waste Services of Ontario, LLC  
1879 Route 5 & 20  
Stanley, NY 14561

Re: 310 CMR 7.00 Appendix B(7)  
Transmittal # W200869  
Conditional Approval of  
BWP AQ 27 and AQ 28 Applications  
Certification and Verification  
of GHG Credits  
at Ontario County Landfill in Stanley, NY

Dear Mr. Leone:

The Massachusetts Department of Environmental Protection hereby approves, with conditions, your Application for Certification of GHG (Greenhouse Gas) Credits (BWP AQ27), dated January 18, 2008. The Department also approves your Application for Verification of GHG Credits (BWP AQ 28), dated January 31, 2008. In accordance with the requirements of 310 CMR 7.00: Appendix B(7)(f), the Department held a 30-day public comment period on the proposed approvals and considered all comments received. The public comment period ended on May 23, 2008.

The conditional approval of your Application for Certification of GHG Credits (BWP AQ 27) creates 90,687 certified GHG Credits for emission reductions that have occurred, and are expected to occur, between May 7, 2007 and February 28, 2009. These credits have been deposited into MA GHG Credit account MAGHG-N-10004; the GHG Credit Account Representative for this account is Timothy Cretney. Certified GHG Credits from this project can only be used by affected facilities for compliance with the CO<sub>2</sub> emissions standards of 310 CMR 7.29, or, if this project is not an offset project type listed under 310 CMR 7.70(10)(c)1.a.<sup>1</sup>, exchanged for CO<sub>2</sub> allowances in accordance with 310 CMR 7.00: Appendix B(7)(h), after subsequent verification by the department.

The approval of your Application for Verification of GHG Credits (BWP AQ 28) creates 32,187 verified GHG Credits for emission reductions that occurred between May 7, 2007 and

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<sup>1</sup> Guidance documents and applications that will clarify exactly which landfill gas projects are allowable under 310 CMR 7.70(10) are under development in coordination with other RGGI states. MassDEP will consider these documents before finally determining whether this project is an offset project type listed under 310 CMR 7.70(10)(c)1.a.

December 31, 2007 at Ontario County Landfill in Stanley, NY. These credits have been deposited into MA GHG Credit account MAGHG-N-10004; the GHG Credit Account Representative for this account is Timothy Cretney. Verified GHG Credits from this project can be used by affected facilities for compliance with the CO<sub>2</sub> emissions standards of 310 CMR 7.29, or, if this project is not an offset project type listed under 310 CMR 7.70(10)(c)1.a., exchanged for CO<sub>2</sub> allowances in accordance with 310 CMR 7.00: Appendix B(7)(h).

Your Application for Certification of GHG Credits (BWP AQ27) covers a longer time period than your Application for Verification of GHG Credits (BWP AQ 28) and, therefore, a greater number of tons of CO<sub>2e</sub> emission reductions. Therefore, in order to ensure that your project successfully reduces, avoids, or sequesters emissions corresponding to certified credits that have not yet been verified, the Department requires that you complete one or more additional Applications for Verification of GHG Credits (BWP AQ 28) in order to create verified GHG Credits corresponding to reductions that occur between January 1, 2008 and February 28, 2009. All verification applications are subject to the same public comment process as certification applications. The total number of additional verified GHG Credits created under such additional applications shall not exceed 58,500, which is the number of GHG Credits that have been certified, but not verified, at this time.

Included as part of this conditional approval of your applications for certification and verification of GHG Credits are the following:

- (1) A description of your project.
- (2) A table showing the number of GHG Credits certified and verified.
- (3) A list of relevant determinations that the Department has made in accordance with the requirements of 310 CMR 7.00: Appendix B(7).
- (4) An explanation of how the number of GHG Credits was calculated.
- (5) An explanation of how GHG Credits are being verified, including a calculation methodology and conditions that the Department has placed on your application for certification of GHG Credits.

Note that your applications are also incorporated, by reference, into this approval.

#### **(1) Description of the Project**

As described in the application,

*The project entails the voluntary destruction of landfill methane at the Ontario County Landfill in Stanley, NY. Destruction occurs through active collection and flaring.*

**(2) Table showing the number of GHG Credits**

	<b>Time period</b>	<b>Number of Credits</b>
<b>Certified GHG Credits</b>	May 7, 2007 through February 28, 2009	90,687
<b>Verified GHG Credits</b>	May 7, 2007 through December 31, 2007	32,187

**(3) A list of relevant determinations that the Department has made in accordance with the requirements of 310 CMR 7.00: Appendix B(7).** (Defined terms and language that is directly excerpted from regulations appear in *italics*.)

The Department has made the following determinations:

- The emission reductions are *Real*, in that there have been, and are anticipated to be, actual reductions in emissions of methane, a greenhouse gas, from the Ontario County Landfill as a result of the project. Methane has been, and will be, destroyed through combustion in a flare.
- The emission reductions are *Additional*, in that, according to the applicant, there is no legal requirement to destroy the methane gas that has been, and will be, destroyed by the flare described in the application between May 7, 2007 and February 28, 2009. According to the applicant, waste was first placed in the cell from which methane is being flared in December 2004, but flaring is not required under current New Source Performance Standards (NSPS) until the sixth year following the initial placement of municipal solid waste into a new landfill cell.
- The emission reductions are *Verifiable*, in that emission reductions have been, and will be, calculated based on daily direct measurements of flow and methane content.
- The emission reductions are *Permanent*, in that methane has been, and will be destroyed in the combustion process.
- The emission reductions are *Enforceable*, in that, pursuant to 310 CMR 7.00: Appendix B(7)(g)8., violations of the requirements of 310 CMR 7.00: Appendix B(7) may be enforced against any person who applied for certification or verification of GHG Credits, an affected facility that purchases GHG Credits created by this project, or any combination thereof.
- The project commenced *on or after January 1, 2006*, in accordance with 310 CMR 7.00: Appendix B(7)(d)9., in that the first flare was installed in May of 2007.
- The project is expected to *generate an annual average over the period applied for of 5,000 or more tons CO<sub>2e</sub>*, in accordance with 310 CMR 7.00: Appendix B(7)(e)3., in that the project is expected to generate approximately 90,000 tons of CO<sub>2e</sub> emission reductions over a period of less than two years.

- The application includes *a proposed method for determining, monitoring and assuring compliance*, in accordance with 310 CMR 7.00: Appendix B(7)(e)4.b., in that data has been, and will be, collected daily.
- The applicant has specified *the best management practice used to determine an emissions baseline*, in accordance with 310 CMR 7.00: Appendix B(7)(e)4.d., in that the application includes the following statement: “The standard practice for LFG [landfill gas] handling (for the first five years following initial placement of waste into new landfill cells) is to allow it to passively vent to the environment. There are no standard BMPs in this context that result in GHG reduction.” Furthermore, the applicant has indicated that, regardless of the status of the flaring project described in this application, landfill gas will be destroyed in an existing engine-generator set after February 28, 2009. Methane destruction that occurs after February 28, 2009 would represent normal best management practice for this landfill and is therefore not eligible to create GHG Credits.
- The project does not present any potential project leakage.
- The *negotiated or anticipated price per ton of GHG Credit applied for* documented in the application is \$5.15 per GHG Credit.

#### (4) Explanation of how the number of GHG Credits was calculated

The number of GHG Credits was calculated using the following equation:

$$\text{GHG Credits} = N_{\text{baseline}} - N_{\text{project}}$$

Where  $N_{\text{baseline}}$  = the number of tons of  $\text{CO}_{2e}$  emitted without the project, calculated thus:

$$N_{\text{baseline}} = N_{\text{CH4(baseline)}} \times 25 \times 0.90 \times 0.98$$

Where:

$N_{\text{CH4(baseline)}}$  = the number of tons of methane expected to enter the flare, or, in the case of verified emission reductions, determined to have entered the flare, as measured by flow and methane content meters; and,

25 = the global warming potential of methane.

0.90 = factor representing the estimated fraction of the methane that would not have eventually oxidized to  $\text{CO}_2$  without the project. Methane that would eventually have oxidized to  $\text{CO}_2$  is not counted as methane emissions for the purpose of determining the project baseline, because it would have been destroyed anyway. This factor is also included in the landfill gas section of the Massachusetts  $\text{CO}_2$  Budget Trading Program regulations.

0.98 = factor representing the estimated combustion efficiency of the methane destruction technology. Methane that passes through the flare without being destroyed is not counted toward the project baseline, because the project will have no effect on these emissions. This factor is also included in the landfill gas section of the Massachusetts  $\text{CO}_2$  Budget Trading Program regulations.

And  $N_{\text{project}}$  = the number of tons of  $\text{CO}_{2e}$  emitted with the project, calculated thus:

$$N_{\text{project}} = N_{\text{CO2}(\text{project})}$$

$N_{\text{CO2}(\text{project})}$  = the number of tons of carbon dioxide created through the combustion of methane, calculated thus:

$$N_{\text{CO2}(\text{project})} = N_{\text{CH4}(\text{baseline})} \times 0.90 \times 0.98 \times 2.75$$

Where:

2.75 = the number of tons of carbon dioxide created for each ton of methane that is combusted. 2.75 is the ratio of the molecular mass of carbon dioxide to the molecular mass of methane.<sup>2</sup>

Data and calculations for this application are summarized in the following table:

	Certification (AQ27)	Verification (AQ28)
$N_{\text{CH4}(\text{baseline})}$	4,621.11	1,640.16
$N_{\text{CO2}(\text{project})}$	11,208.50	3,978.21
$N_{\text{baseline}}$	101,895.47	36,165.53
$N_{\text{project}}$	11,208.50	3,978.21
<b>GHG Credits</b>	<b>90,687</b>	<b>32,187</b>

**(5) Explanation of how GHG Credits will be verified, including a calculation methodology and conditions that the Department has placed on this Application for Certification of GHG Credits**

Your Application for Certification of GHG Credits (BWP AQ 27) is being approved subject to the following two conditions: (1) Future verification applications will be evaluated using the same calculation methodology used to verify reductions that occurred between May 7, 2007 and December 31, 2007, as described in sections (3) and (4) of this document. (2) In the event that the project is eventually determined to be an offset project type listed under 310 CMR 7.70(10)(c)1.a., then, in accordance with 310 CMR 7.00: Appendix B(7)(d)10, no verified GHG Credits will be created for reductions that occur after December 31, 2008 (though the applicant could apply for CO<sub>2</sub> offset allowances under 310 CMR 7.70(10)). In determining whether the project is an offset type listed under 310 CMR 7.70(10)(c)1.a., MassDEP will consider guidance documents and application forms that are developed to clarify and implement the requirements of 310 CMR 7.70(10).

<sup>2</sup> MassDEP is counting the net reduction of GHG emissions from this project. The flare converts one greenhouse gas (methane) into another greenhouse gas (carbon dioxide). The change in the global heat trapping effect of the gases emitted from the landfill is the difference between the effect of the methane that would have been emitted if the project had not occurred and the effect of the carbon dioxide that was created and emitted by the project.

Should you have any questions concerning this **CONDITIONAL APPROVAL**, please contact Will Space at [william.space@state.ma.us](mailto:william.space@state.ma.us) or (617) 292-5610.

Very truly yours,

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Nancy L. Seidman  
Deputy Assistant Commissioner  
Climate Strategies  
Bureau of Waste Prevention

cc: William Lamkin, DEP, BWP, NERO  
William Space, DEP, BWP, Boston